

**EPA RESPONSES TO CITY AND COUNTY OF DENVER TECHNICAL COMMENTS ON THE  
GROUNDWATER DATA SUMMARY REPORT, VASQUEZ BOULEVARD/INTERSTATE 70  
SUPERFUND SITE OPERABLE UNIT 2, DENVER, COLORADO.**

**CCoD Comment 1.** The report is focused solely on a comparison of the monitoring results to water quality standards and does not include any comparisons between upgradient and downgradient water quality data. In fact, the report does not even include data on the summary table for either of the two upgradient wells except for chloroform in MW-006.

Response: A rigorous upgradient/downgradient comparison of results was not performed because the source areas for the groundwater contamination and the water table within OU2 is imperfectly known at this time. Table 4-1 only includes the analytes that were above the CBSGs. Upgradient Well MW006 only had chloroform as an exceedance of the CBSG and that is why only chloroform is included in the Table. However, based on other CCoD comments, iron concentration data have been added for the upgradient wells. Section 5.0 of the DSR has been revised to state, "Upgradient Wells MW005 and MW006 are free from the organic and metals contamination found in downgradient Wells MW001, MW002 and MW003, although iron concentrations are slightly elevated relative to State Drinking Water Standards in the upgradient wells."

**CCoD Comment 2.** Section 4.2.1 – Volatile Organic Compounds states that cis-1,2-dichloroethene (c-1,2-DCE) was detected in MW-001 at concentrations above the Colorado Basic Standard for Groundwater (CBSG) during all four quarterly monitoring events. This conclusion is based on a comparison of sample results to a CBSG of 14 ug/l which is listed in the CBSG along with the MCL of 70 ug/l. The footnote in the CBSG relative to these two values states:

*Where ground water quality exceeds the first number in the range due to a release of contaminants that occurred prior to September 14, 2004, (regardless of the date of discovery or subsequent migration of such contaminants) clean-up levels for the entire contaminant plume shall be no more restrictive than the second number in the range of the ground water quality resulting from such release, whichever is more protective.*

Therefore, the CBSG that should be used would be the 70 ug/l. None of the results from MW-001 exceed this level.

Response: Groundwater cleanup levels have not been established for OU2. The purpose of the DSR was simply to compare groundwater concentrations to applicable standards such as the CBSGs. The CBSG table includes both the State level for cis 1,2 dichloroethene of 14 ug/L and the MCL of 70 ug/L, and Table 4-1 of the DSR shows both values. The footnote also states, "The Commission intends that control requirements for this chemical be implemented to attain a level of ambient water quality that is at least equal to the first number in the range." Therefore comparison to the lower standard seems appropriate until such time as groundwater cleanup levels are determined, typically at the time of the ROD.

**CCoD Comment 3.** Section 4.2.3 – Unfiltered Metals states that iron exceeded the drinking water standard in all five monitoring wells. Section 4.2.4 – Filtered Metals makes a similar statement that iron exceeded the standard in all five wells. However, the report does not contain any data for the two upgradient wells (MW-005 and MW-006). Because groundwater in the two upgradient wells may also contain elevated concentrations of iron, the elevated concentration of iron in groundwater may not be a site specific condition.

Response: Table 4-1 in the DSR only listed the Iron concentrations that were above the Agricultural Standard of 5000 ug/L to identify those wells with high iron in the groundwater. However, iron values for all wells will be added to Table 4-1 along with the State Drinking Water Standard of 300 ug/L to allow for identification of iron concentrations in all wells. All analytical data will be included in Appendix D of the DSR.

**CCoD Comment 4.** Despite the presence of iron and the lack of any presentation of data for the two upgradient wells, the Executive Summary and the Conclusions and Recommendations section of the report state that the upgradient wells MW005 and MW006 are free from the types of contamination found in downgradient wells MW001, MW002 and MW003. Based on information presented in the report, this conclusion is not supported. Please provide analytical results that defend this statement.

Response: Table 4-1 will be revised to add the iron values for all wells. The referenced statement has been revised to state, "Upgradient Wells MW005 and MW006 are free from the organic and metals contamination found in downgradient Wells MW001, MW002 and MW003, although iron concentrations are slightly elevated relative to State Drinking Water Standards in the upgradient wells." All analytical data will be included in Appendix D of the DSR.

**CCoD Comment 5.** The Executive Summary and the Conclusions and Recommendations sections of the report both make reference to "recent groundwater results from other projects conducted in OU2 suggest that there may be other sources for groundwater contamination upgradient of the landfill." However, the report does not provide any specifics on this or any references to other projects. Please cite references.

Response: The references will be added to the DSR.

**CCoD Comment 6.** The report recommends that additional monitoring wells (elsewhere they refer to these as piezometers) be installed in areas midway between the upgradient and downgradient wells to provide better definition of the water table and better interpretation of groundwater flow directions. This is unnecessary. There is no reason to expect that the groundwater flow directions will be anything other than the overall northwest direction, towards the river, than has already been defined. We cannot see any type of decision that would hinge on verifying a groundwater flow direction that could be off a few degrees either way. Furthermore, as discussed below the proposed locations are duplicative with the locations of other additional monitoring wells recommended by the report.

Response: The five monitoring wells evaluated in the DSR are at the edges of the operable unit and there are currently no wells in the interior of OU2 to refine the water table depictions in the DSR. Water levels from locations within OU2 would provide more confidence as to the potential groundwater flowpaths in the area.

**CCoD Comment 7.** The report recommends installing additional monitoring wells on site immediately upgradient of the landfill to better assess the landfill's contribution to contamination observed in the downgradient wells. These locations would actually be the same as the locations of the piezometers that were recommended to be installed midway between the upgradient and downgradient wells. Furthermore, without review of the water quality data from the two upgradient wells and review of the data from the "other projects in OU2" (see comment 5.) we cannot agree that additional wells are needed.

Response: At the time of finalizing the DSR, specific information with respect to the results of the "other projects" referred to was not available so that further discussion was not provided in the DSR. However, a reference has been added for the other project referred to in the text. Recommendations with respect to additional wells upgradient of the landfill were included because the EPA was specifically interested in potential contamination emanating from the landfill and the recommendation was focused on improving an understanding of any landfill related effects on groundwater quality.